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# Features of interaction of children with developmental disorders with peers and adults

*Características de la interacción de niños con trastornos del desarrollo con compañeros y adultos.*

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### ABSTRACT

The ability of children to interact with their peers and adults allows them to adapt to new social conditions. The aimed of this study was to explain how preschoolers with developmental disorders understand the rules in a normative situation. The research involved 227 children of 5-7 years of age: 95 children with no developmental disorders and 132 children with speech, motor, sensory, and emotional disorders. It was used the technique called "The methodology for the study of preschooler compliance with the rules in a regulatory situation." It is suggested that children of all gnosological groups have problems social adaptation.

**Keywords:** Developmental disorder, child, interaction, preschool age, socialization.

### RESUMEN

La capacidad de los niños para interactuar con sus compañeros y adultos les permite adaptarse a las nuevas condiciones sociales. El objetivo de este estudio fue explicar el desarrollo de los trastornos en preescolares y como entienden las reglas en una situación normativa. La investigación incluyó a 227 niños de 5 a 7 años de edad: 95 niños sin trastornos del desarrollo y 132 niños con trastornos del habla, motores, sensoriales y emocionales. Se usó la técnica llamada "La metodología para el estudio del cumplimiento de un preescolar de las reglas en una situación regulatoria". Se sugiere que los niños de todos los grupos gnosológicos tienen problemas de adaptación social.

**Palabras clave:** Intercultural

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## INTRODUCTION

The ability of children to interact with their peers and adults according to the generally accepted rules and norms of behavior allows them to adapt to new social conditions (Akhmetzyanova et al.: 2017, pp. 489–504). Children interact with a culture all the time, and the success of their socialization lies in this interaction (Bayanova et al.: 2016, pp. 94-105). According to Vygotsky (1996), it is necessary to take into account the role of a culture in a social situation of the development of a child. This interaction and the rules create a particular situation, which is called a normative situation in psychology. As noted by L.F. Bayanova and T.R. Mustafin, cultural congruence is understood as “a degree of a child’s conformity to culture as a system of normative situations typical for their age” (Bayanova: 2017).

The social situation of development determines adults play the social relationships of children with people around them and the main part. The links of a preschooler are associated with the socialization of a child and transmission of the existing rules of culture from adults to children. The more a child can overcome natural egocentrism and subordinate one’s behavior to cultural standards, the more congruent with the lifestyle he seems in social interaction. Cultural congruence is an indicator of the compliance of a child with a regulatory situation. It is determined through the assessment of a child by an adult, which is also explainable in terms of a cultural-historical theory developed by Vygotsky (Veraksa et al.: 2018, pp. 648–658). During the process of interiorization, culture gives a child the means that allow them to learn and explore the surrounding world, to express their feelings, and also to organize their behavior (Vygotsky: 1996).

Barkhatova (2009, pp. 18 - 25) states that a culture of behavior is formed through acquiring universal moral values, moral and ethical norms of behavior, aesthetic culture. At the same time, a significant role is played by adults who – in the process of interaction with preschoolers – contribute to their socialization and transmission of existing rules (Bayanova: 2017).

Solntseva (2006) notes that children with visual impairments have specific features associated with a sensory sphere, which lead to restrictions on the ability to obtain information from the outside world, changes in methods and means of communication, difficulties of social adaptation and social experience (Solntseva: 2006). All of these factors can also impede the assimilation of rules in a normative situation. T.Y. Shilina (2017) writes that preschoolers with visual impairments may have a low level of development of social development components such as understanding of moral norms, knowledge of the rules of behavior, self-esteem, value orientations (Mirkazemi & Hosseini: 2016, pp. 56-61; Shilina: 2017).

The danger of misunderstanding the norms and rules of behavior and non-observance of these rules by children with autism spectrum disorder leads to the emergence of problematic behavior (Rozenal: 2018, pp. 124-131; Akhmetzyanova: 2018, pp. 508-515; Artemyeva: 2016, pp. 1551-1558) including the aggressive one which is often found in this disorder and leads to a significant violation of a child’s socialization, causing secondary isolation (Bellini et al.: 2006, pp. 1-4; Chereueva & Volodenkova: 2017).

According to most experts, problematic behavior is one of the underlying disorders in autism, which can manifest itself in repeated gestures and movements. In terms of action, it can be expressed in the aggression both towards the teacher and towards oneself (Maltinskaya: 2016, pp. 67-74). Difficulties in understanding and mastering the norms and rules of social interaction make it difficult for a child with developmental disorders to adapt to new social conditions and socialize in society. Therefore, the purpose of our study was to explore the peculiarities of how preschoolers with developmental disorders understand the rules and norms of social interaction. The empirical research of children of preschool age with developmental disorders and without developmental disorders allowed us to find out that children of all nosological groups have difficulties in social adaptation, in obtaining social experience and assimilating the rules in a normative situation. Limited opportunities for getting information from the outside world make it difficult for them to develop means of communication with adults and peers. Children with developmental disorders find it harder to master the skills of taking care of their things and regime moments; not always do they follow the safety rules in social interaction with strangers, and in their behavior, they also have limited interaction with adults.

## METHODS

At the scoping stage, we prepared a set of documents including information on the relevance of the study, description of the study's aims, objectives, and steps, as well as characteristics of research methods. This set of documents was submitted to the Ministry of Education and Science of the Tatarstan region. As a result, we received authorization to conduct the study. Several nursery schools in the Tatarstan region were chosen to provide a sturdy base. We met the principals of each participating nursery school and explained the aims, objectives, and the procedure of the study to them. The parents and legal representatives of the children gave us written consent for children's participation in the study.

In our study, we used the method for studying the compliance of a preschooler with the rules of a normative situation developed by L.F. Bayanova, T.R. Mustafin (2015, pp. 325-332). It is aimed at studying the preschooler's compliance with the rules of social norms. It allows us to identify four substantial factors that describe the practices in normative situations that are typical for preschool age: "Obedience, compliance with the expectations of an adult," "Safety," "Self-care, hygiene," "Self-control." The degree of compliance of a preschooler with the rules of a normative situation is considered as his cultural congruence (Bayanova & Mustafin: 2015, pp. 325-332).

SPSS Statistics 23 statistical program.

The study involved 227 children aged 5-7 years: 95 children with no developmental disorders and 132 children with speech, motor, sensory, and emotional disorders:

- 95 children with no developmental disorders;
- 73 children with severe speech disorders;
- 24 children with visual impairments, various stages of amblyopia and strabismus;
- 15 children of pre-school age (5-7 years of age) with hearing impairment (sensorineural hearing loss, IV degree);
- Ten children with autism spectrum disorder;
- Ten children with movement disorders.

## RESULTS

### Statistical data

The results of an empirical study aimed at identifying the specifics of social interaction and a child's understanding of social norms and rules are presented in Table 1.

**Table 1.** The specifics of social interaction of preschoolers

Factors	Obedience		Safety		Hygiene		Self-control	
	M	SD	M	SD	M	SD	M	SD
Children with normal development (n=95)	46.50	6.70	58.0	10.60	39.60	6.42	32.74	3.61
Children with speech disorders (n=73)	44.0	9.90	53.50	12.60	37.50	8.70	32.00	6.93
Children with autism spectrum disorder (n=10)	29.60	13.6	37.80	13.41	29.40	15.21	21.80	7.42
Children with visual impairment (n = 24)	35.77	10.09	51.57	10.48	26.97	10.47	23.70	7.80
Children with impaired hearing (n=15)	33.27	10.70	45.34	7.61	36.34	6.50	31.00	7.70
Children with movement disorders (n=10)	29.78	8.39	39.33	8.26	34.11	6.39	28.78	6.36

To identify statistically significant differences between the values of the samples of children with developmental disorders and children without developmental disorders, we used Student's t-test.

### **Children with speech disorders**

We found that the average indicators for the factors "Obedience," "Safety," and "Hygiene" in preschoolers with severe speech disorders are lower than in children without developmental disorders. Statistically significant differences were identified in two factors: "Safety" ( $t = 2.49, p < .001$ ) and "Obedience" ( $t = 1.96, p < .05$ ). According to the "Obedience" factor, preschoolers with severe speech disorders have a lower average value than children without disorders ( $Msd = 44.0, Mn = 46.5$ ): the behavior of children with severe speech disorders does not always meet the expectations of adults. Children with speech pathology do not always comply with safety rules ( $Msd = 53.5, Mn = 58.0$ ).

The values of the "Self-control" factor in children of two samples are equal ( $Msd = 32.0; Mn = 32.7$ ). Like their homotypic peers, preschoolers with severe speech disorders can limit their impulsiveness and can control their actions in social interaction.

When it comes to the "Hygiene" factor, preschoolers with severe speech disorders have a lower average ( $Msd = 37.5$ ) than preschoolers with no developmental disorders ( $Mn = 39.6$ ): not always children have self-care skills or fully understand the rules aimed at maintaining hygiene.

### **Children with visual impairment**

Significant differences between the samples of children with visual impairment and neurotypical children were identified in the "Safety" factor ( $t = 3.11, p < .001$ ). Children with visual impairment are not always able to comply with the safety rules aimed at the preservation of life and health (playing with dangerous objects, communicating with strangers). Besides, not always try to avoid physical damages as well.

Average indicators of all factors in children with visual impairments are lower than those of their peers without visual impairment. Not always self-care skills and hygiene rules are followed by visually impaired children ( $Mvi = 26.97, Mn = 39.60$ ).

The behavior of children with visual impairments in society does not always meet the expectations of adults as they violate the norms and rules of interaction in a situation of communication. Children can touch other people's things without their permission and may do something without asking permission from an adult ( $Mvi = 35.77, Mn = 46.50$ ).

Not in all situations, children with visual impairment show enough self-control. Preschoolers with a disorder of the optical analyzer may not always follow the rules that provide for limiting impulsivity, control of actions, attentive and careful task performance ( $Mvi = 23.70, Mn = 32.74$ ).

### **Children with impaired hearing**

The analysis of the research results revealed statistically significant differences between samples of preschoolers with hearing impairments and their homotypic peers in the "Security" factor ( $t = 4.58, p < .001$ ). Subjects with hearing impairment are less likely to follow the rules that prevent physical injuries and dangers from contacting strangers. They play with dangerous objects and like to be and move in the places where they can fall.

Low values of the "Obedience" factor ( $Mih = 33.27; Mn = 46.50$ ) indicate that the behavior of preschoolers with hearing impairments does not always meet the expectations of adults: children may not greet adults, interrupt their speech, or show no respect to them.

The results on the "Hygiene" factor in children with hearing impairments are lower compared to their peers with no violations ( $Mih = 36.34; Mn = 39.60$ ): children not always follow the daily regimen, rules of personal care, and also take care of their things. Children with hearing impairments are not still successful in such areas as self-control in social interaction, attentive execution of the tasks, self-control of emotional reactions ( $Mih = 31.00; Mn = 32.74$ ).

### **Children with an autism spectrum disorder**

The analysis of the research results revealed statistically significant differences between samples of children with autism spectrum disorder and their homotypic peers in the "Safety" factor ( $t = 5.63, p < .001$ ).

Children with autism spectrum disorder are more likely to do things that may entail consequences that might be dangerous for them; not always, they understand these dangers and try to avoid such situations. The results of children with an autism spectrum disorder in obedience factor indicate their limited orientation to interact with adults and meeting expectations of the adults (Masd = 29.6, Mn = 46.50).

The behavior of children with autism spectrum disorder does not always comply with the rules aimed at maintaining hygiene, such as following the daily regimen and taking care of things (Masd = 29.4, Mn = 39.60).

Children with autism spectrum disorder showed a reduced ability to control their actions and behavior following social norms and rules (Masd = 21.80, Mn = 32.74).

### **Children with movement disorders**

In children with movement disorders, the differences in almost all factors were statistically significant: "Obedience" ( $t = 6.81, p < .001$ ); "Safety" ( $t = 5.57, p < .001$ ); "Hygiene" ( $t = 4.12, p < .001$ ). The behavior of children with movement disorders often does not meet the expectations of adults; their self-service skills are poorly formed, and they tend not to follow the rules of hygiene and safety.

## **DISCUSSION**

Compliance with the safety rules is part of the culture of a modern child, which requires absolute conformity and congruence with culture from him. According to Obukhova (2013), preschool age is a period when a predominance of controlled actions over impulsive ones begins to prevail in a child (Obukhova, 2013). Self-control is caused by the emergence of the subordination of motives and by the development of voluntary behavior in children, which means that children of preschool age can control their behavior in a situation of social interaction (Jacquez: 2013, pp. 176–189). The results of our study confirm this statement. Children without disabilities in development showed high results on the factor "Self-control," indicating the ability to control their emotional reactions and behavior in social situations.

The study suggests that children of all nosological groups have difficulties with social adaptation, gaining social experience, and learning the rules in a normative situation. Limited opportunities for obtaining information from the outside world make it challenging to develop a means of communication with adults and peers.

Talking about the socialization of children with different types of dysontogenesis, the researchers point out the specific features of assimilation and reproduction of social links and relationships. The study by Guralnick (2010, pp. 73-83) revealed that it is tough for visually impaired children to have good interaction with peers since there are certain limitations in their behavior that are caused by difficulties in obtaining information through vision. Studies have shown that children with visual impairments demonstrate the kind of playful behavior which is individual and exploratory. In essence, such children do not seek to engage in collective games. The study revealed that children with developmental disabilities experience difficulties in social interaction, their behavior does not always meet the expectations of adults, they often violate the norms and rules of communication in situations of interaction with peers, which affects the socialization of children. Also, not in all cases, children with visual impairment show enough self-control as they cannot always follow the rules of social interaction and control their actions.

The study by Smirnova and Kholmogorova (2003), Corsaro (1993, pp. 357–374), Denham (2007, pp. 1–48), Mirabile (2018, pp. 466–481) emphasize the importance of friendly relations between children of older preschool age because they form the basis for understanding the rules of relationships and the ability to find adequate ways of expressing attitudes towards peers, which – under certain conditions of upbringing – grow into real motives and encourage children to take socially valuable behavior towards others. This study confirmed that the ability for self-control in social interaction in children with developmental disorders is significantly reduced and lower in comparison to their peers with no developmental disorders.

## **CONCLUSION**

Empirical studies showed that the values of children with no developmental disorders in all factors of the methodology, which reflect the level of cultural congruence and compliance with social norms and rules, are significantly higher in comparison to their peers with speech, hearing, visual, motor and emotional disorders. The most top results in children with typical development were marked in the "Obedience" factor, which reflects the congruence of children's behavior with the expectations of adults regarding usual rules of interaction in a normative situation. Children usually demonstrate honesty and respect for adults, and they also organize their behavior following their requirements and expectations. High values of the "Self-Control" indicator reflect the compliance of children's behavior with the rules providing for careful execution of tasks, accuracy, self-control of emotional reactions, attentiveness, and restraint.

Our study suggests that children of all nosological groups have difficulties in social adaptation, gaining social experience, and learning the rules in a normative situation. Limited opportunities for obtaining information from the outside world make it difficult for them to develop means of communication with adults and peers. Children with developmental disorders find it harder to master the skills of taking care of their things and regime moments; they do not always follow the safety rules in social interaction with strangers, and in their behavior, they also have limited interaction with adults.

Preschoolers with hearing impairments face difficulties with controlling their behavior in a normative situation. Children with autism spectrum disorders not always understand and avoid dangerous situations. Children with an autism spectrum disorder, with severe speech disorders and movement disorders, are characterized by a significantly reduced orientation towards interaction with adults and compliance with the expectations of adults. Children with harsh speech disorders not always perceive the prohibitions of an adult as a source of their safety, which, in turn, leads to behavioral disorders.

The values of the "safety" factor in all groups of children with developmental disorders are significantly lower than in children without developmental disorders. The study suggests the need for special correctional and developmental activities aimed at developing successful social behavior in children with developmental disorders.

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